REMARKS

Prior to entry of this amendment, claims 1-20 are currently pending in the subject application. Claims 5-14 and 16 are withdrawn from consideration. Claims 1-4 and 18 have been amended. Claims 1, 3 and 17 are independent.

Applicants note with appreciation the Examiner's acknowledgement of applicants' claim for foreign priority and receipt of a certified copy of the priority document.

Applicants note with appreciation the Examiner's acceptance of the drawings filed August 29, 2003.

Applicants note with appreciation the Examiner's consideration of applicants' Information Disclosure Statements filed September 28, 2004 and November 16, 2004.

A. Asserted Anticipation Rejection of Claims 1-4, 15 and 17-20

In the outstanding Office action, the Examiner rejected claims 1-4, 15 and 17-20 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2003/0198184 to Huang et al. ("the Huang et al. reference"). This rejection is respectfully traversed for at least the reasons set forth below.

Claim 1 has been amended as follows:

> An open-source method for controlling a multimedia data generation rate, comprising:
> (a) generating multimedia data in real time according to a current multimedia data generation rate and transmitting the multimedia data from a data generator to a first layer of a wireless terminal ;
> (b) supplying ~~receiving~~ transmission buffer, through which the multimedia data is transmitted, state information and a multimedia data loss rate during the transmission of the multimedia data from a second layer of the wireless terminal to a third layer of the wireless terminal;
> (c) calculating a real-time multimedia data generation rate based on the transmission buffer state information and the multimedia data loss rate, and transmitting the real-time multimedia data generation rate from the third layer to the data generator; and
> (d) generating multimedia data in real-time according to the real-time ~~calculated~~ multimedia data generation rate and transmitting the generated multimedia data from the data generator to the first layer in the wireless terminal.

Thus, as now more clearly set forth in claim 1, the real-time multimedia data generation rate may be calculated by a layer in the wireless terminal in accordance with information from another layer within the wireless terminal, as disclosed, for example, in FIG. 2 and paragraph [0041] of the original specification.

In contrast, the data rate set point in the Huang et al. reference is altered based on a feedback report (FR) sent from a client to a server. If no FR has been received within a certain time period, i.e., the wireless connection is variable, then the server may gradually adjust the data rate set point, but such adjustment is not in accordance with the transmission buffer state information and the multimedia data loss rate as recited in claim 1. *See, e.g., FIG. 2 of the Huang et al. reference.* Therefore, it is respectfully submitted that the Huang et al. reference fails to disclose or suggest the embodiment now recited in claim 1.

Claim 3 has been amended as follows:

> An open-source apparatus, which controls a multimedia data generation rate, comprising:
>
> a multimedia data generation and transmission unit configured to generate ~~for generating~~ multimedia data in real-time according to a current multimedia data generation rate and to transmit ~~for transmitting~~ the multimedia data to a wireless terminal;
>
> a buffer state and packet loss rate information reception unit in the wireless terminal, the buffer state and packet loss rate information reception unit configured to receive ~~for receiving~~ transmission buffer, through which the multimedia data is transmitted, state information and a multimedia data loss rate during the transmission of the multimedia data; and
>
> a multimedia data generation rate calculation unit in the wireless terminal, the multimedia data generation rate calculation unit configured to calculate ~~for calculating~~ a real-time multimedia data generation rate corresponding to the transmission buffer state information and the multimedia data loss rate from the buffer state and packet loss rate information reception unit,
>
> wherein the multimedia data generation and transmission unit is configured to receive ~~receives~~ the real-time ~~calculated~~ multimedia data generation rate from the multimedia data generation rate calculation unit, to generate ~~generates~~ multimedia data in real time according to the real-time ~~received~~ multimedia data generation rate, and to transmit ~~transmits~~ the multimedia data to the wireless terminal.

Thus, as now more clearly set forth in claim 3, the real-time multimedia data generation rate may be calculated by a unit in the wireless terminal in accordance with

information from another unit within the wireless terminal, as disclosed, for example, in FIG. 2 of the original specification.

Again, the data rate set point in the Huang et al. reference is altered based on a feedback report (FR) sent from a client to a server. If no FR has been received within a certain time period, i.e., the wireless connection is variable, then the server may gradually adjust the data rate set point, but such adjustment is not in accordance with the transmission buffer state information and the multimedia data loss rate as recited in claim 3. *See, e.g., FIG. 2 of the Huang et al. reference.* Therefore, it is respectfully submitted that the Huang et al. reference fails to disclose or suggest the embodiment now recited in claim 3.

Claim 17 recites, in part,

> when the current wireless channel state is variable, calculating the multimedia data generation rate based on transmission buffer state information and multimedia data loss rate, and
> otherwise, calculating the multimedia data generation rate based on a permissible polling cycle and packet length.

The Examiner relies on FIG. 2 and ¶¶ [0020] to [0026] of the Huang et al. reference as disclosing the limitations in claim 17. While ¶ [0021] of the Huang et al. reference may disclose dealing with error prone networks, a symptom of such an error would be missing a FR. Thus, when the current wireless channel state in the Huang et al. reference is variable, i.e., FR not received after a certain period of time (Timer 1 expires), the data rate set point would be gradually adjusted in 1000, which is *not* in accordance with the transmission buffer state information and multimedia data loss rate, as recited in claim 17. Only when the FR has been received in the Huang et al. reference is the data rate set point calculated in accordance with the transmission buffer state information and multimedia data loss rate. Further, if neither timer has expired, the Huang et al. reference teaches doing *nothing* to the data rate set point in 1100.

Therefore, it is respectfully submitted that the Huang et al. reference fails to disclose or suggest the embodiment recited in claim 17, in which the multimedia data generation rate

is either calculated based on transmission buffer state information and multimedia data loss rate, or on a permissible polling cycle and packet length.

Claim 18 depends from claim 17, and has been amended to parallel claim 1, and is believed to be allowable for at least the reasons set forth above regarding claims 1 and 17.

In summary, in the open source method for controlling a multimedia data generation rate as recited in claims 1, 3 and 17, information is transmitted to the RTCP layer from the MAC layer of a wireless terminal. This information includes **a multimedia data loss rate** and **a state of a transmission buffer** used for transmitting multimedia data.

In contrast, the $BYTE_{BUFFERED}$ in the Huang et al. reference refers to the amount of data residing in the wireline/wireless network buffer. *See, e.g., paragraph [0020] of the Huang et al. reference.* The $BYTE_{BUFFERED}$ is estimated based on the difference between the cumulative number of bytes sent from the server and that received by the client. *See, e.g., paragraph [0022] of the Huang et al. reference.* Therefore, in Huang et al., the multimedia data generation rate is controlled by an RTCP, which monitors a state of a network between a receiving party and a sending party based on the $BYTE_{BUFFERED}$.

The remaining rejected claims depend from various ones of claims 1, 3 and 17, and are believed to be allowable for at least the reasons set forth above regarding their respective base claims. Therefore, it is respectfully requested that this rejection be withdrawn.

B. Conclusion

The remaining documents cited by the Examiner were not relied on to reject the claims. Therefore, no comments concerning these documents are considered necessary at this time.

The above remarks demonstrate the failings of the Examiner's arguments with respect to the outstanding rejections, and are sufficient to overcome them. However, while these remarks may refer to particular claim elements, they are not intended to, nor need they, comprehensively address each and every reason for the patentability of the claimed subject

matter over the applied art. Accordingly, applicants respectfully submit that the claims are allowable for reasons including, but not limited to, those set forth above, and patentability of the claims does not depend solely on the particular claim elements discussed above.

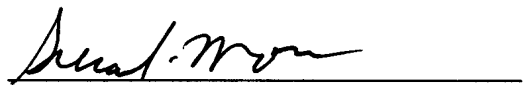
In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

Respectfully submitted,

LEE & MORSE, P.C.

Date: September 7, 2007



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